

ABSTRACT OF THE DISCLOSURE

The apparatus for processing an in-process substrate by generating a plasma have a processing chamber with an observation window, in which the in-process substrate is disposed; plasma generating means for generating a plasma in the inside of the processing chamber; irradiation means for projecting a light beam into the inside of the processing chamber through the observation window; detection means for detecting the light projected and reflected from the inside wall of the chamber by the irradiation means; and data processing means for obtaining information on the state of contamination of the inside wall of the processing chamber by processing signals obtained through detection of the reflected light by the detection means, and thereby permitting simultaneously monitoring of both the state of contamination of an inside wall of the processing chamber and foreign materials suspended in the processing chamber, with a single observation window and an optical system composed of one unit,